



The Monthly Newsletter of the Surrey Amateur Radio Club

August 2010

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The SARC Communicator is published monthly for members of the Surrey Amateur Radio Club.

SARC maintains a website at www.ve7sar.net that includes club history, meetings, news and other information.



A Busy SARC Summer

... as we move into a new fall season

Summer greetings to our ever-growing membership, now at 66 and increasing steadily. I'm told that the attraction for new members is that they enjoy the variety of activities and the friendly welcome they receive from regular members. Our first meeting of the Fall season on Sept. 8th will be focused on what we are doing right and what we could do better. We hope you will give this serious thought over the next few weeks and bring forth your ideas for discussion. What is needed even more than ideas, are members willing to offer their time and talents to organize and assist with activities - please consider putting your name forward as a volunteer as there are never enough.

Summer has not been an idle time for your Executive, with the Aug. 22nd Flea Market including the Raffle taking up much of our time. This is the first time we have ever taken on this kind of challenging activity, so every detail must be thought out. Will the buyers and sellers come, and where do we put them? Will it

rain? Do we have enough tents? How do we organize the door prizes and the raffle? The list is endless and the organizing committee has spent many hours pondering and planning to make it a success. We hope you will attend and support your club so that we can take on more worthwhile projects, all of which cost money.

And that brings me to another topic... are you frustrated because of limited ability to get into the Surrey repeater when participating in nets or chats with your colleagues? A fast-moving initiative is the possibility of a new, high-elevation site for our VHF and UHF repeaters, one which should significantly improve the coverage throughout Surrey. The opportunity is there, but we are several steps away from success, which will depend on hard work combined with some luck and enthusiastic promotion from our supporters in the City of Surrey. Further details will be provided as events develop.

- John Brodie VA7XB

SEPAR Has Also Been Busy

For those who are unfamiliar with the Surrey Emergency Program Amateur Radio Society (SEPARS) please take a few minutes and visit our website at www.separs.net where you will find complete information on our emergency activities. As well, consider signing up for the users group <http://groups.google.com/group/separ> where current information is always available and you will find a calendar of events, photos, training files, forms and more.

Most recent activities for SEPARS have been participation in Field Day and Canada Day. SEPARS provided the radio equipment for the joint Surrey ARC - Langley ARA Field Day and we set up a demonstration station with one of our grab and go kits at the Canada Day Celebration. Both these events provided an opportunity to practice using our portable communi-

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SARC EXECUTIVE FOR 2010-2011

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Chris Zetner VA7CMZ

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cation equipment and further promote amateur radio to the public. The portable emergency equipment performed flawlessly and continues to be a major asset in our commitment to provide emergency communications to the City of Surrey.

As well as the three grab and go kits, SEPARS operates and maintains a complete radio station at Fire Hall #1 EOC and we make this equipment available for anyone who would like to operate a contest or just check into the nets. The station has D-star and full Winlink capabilities as well as HF.

SEPARS will have our communications equipment set up at the upcoming Surrey/Langley flea market on August 22nd, see the SARC website www.ve7sar.net, for complete details. If you plan to attend the flea market please stop by our booth and operate one of our radios.

If you would like to join SEPARS please contact me at ve7io@separs.net or call Jocelyne Colbert, SEPARS administrator at 604.543.6795. Jocelyne can also be reached by email at jmcolbert@city.surrey.bc.ca.

SEPARS next meeting will be held at the South Surrey Recreation Center on Wednesday October 6th at 1900 hours. Guests are welcome, please let us know if you would like to attend.

- Fred Orsetti VE7IO



QRM News Clips

Ham reception of Apollo lunar signals

Some doubt that the Apollo lunar missions took place and have questioned whether Radio Amateurs received their signals from the moon. A YouTube video shows how Ham Radio operators did it.

Radio Hams have been bouncing 2304 MHz signals off the moon on since 1970 as well as using the band for terrestrial contacts for many years before that. They certainly had the capability to receive Apollo on 2290 MHz just a few MHz lower.

This HD YouTube video documents some of the pioneering hams who received the Apollo transmissions.

Watch MoonFaker:

http://www.youtube.com/watch?v=qO9FxlA8-Xw&feature=player_embedded

And Radio Amateur received Apollo 11:

http://www.southgatearc.org/news/july2010/radio_ham_received_apollo11.htm

What ham shack, garage, or tool kit doesn't include a can (or two) of WD-40? You can smell it just thinking the name, can't you? Invented 57 years ago (!), its longevity is being celebrated as described by this article in the [Wired Gadget Lab](#). Bonus points if you still have one of those original cans. Double bonus if you use it for the original intended purpose of displacing water!

SEPARS Report

SEPAR or SEPARS?

A bit of a clarification on a question posed recently. Surrey Emergency Program Amateur Radio (SEPAR) is the Amateur Radio component of the Surrey Emergency Program. Anyone can apply to become a volunteer subject to a confidential criminal records check by the RCMP. Upon acceptance, a PEP photo ID card is issued and members can attend all events, meetings and training, including a great annual volunteer appreciation dinner hosted by the City of Surrey.

SEPARS is the Society formed in 2009 to promote SEPAR and to engage in fund-raising. Any SEPAR member can choose to become a SEPARS member (and we hope you do) but it is not mandatory. There is a \$10 annual membership fee which supports the Society.

At the annual General Meeting, only SEPARS members may vote. Other than corporate sponsors, individuals cannot join SEPARS without first joining SEPAR.

SEPAR Placed on Stand-by

Well... it looks like Amateur radio may be put to use again. Remember The "Firestorm of 2003"? It looks like things are going to be same thing all over again. SEPAR has been asked to be on standby for a possible activation. In the back country communications are difficult at best if one is not close to a cellular tower, but communications may be compromised, even in a developed area with lots of infrastructure. As hams know, we can be deployed anywhere without infrastructure. We can be on HF, VHF, UHF.

Any Amateurs with the time on their hands and want to help get ready. We may be needed sooner than you think.

http://en.wikipedia.org/wiki/2003_Okanagan_Mountain_Park_Fire

We are looking for volunteers to stand by should we need to deploy our grab and go kits or assist with the communications for PEP during the fire season. If you can volunteer some time please email Fred Orsetti ve7io@separs.net or John Schouten ve7ti@separs.net

Radio Room

Computers are mostly up and running at the radio room. The computers have been programmed and are ready to use but we need to install Airmail etc.

We now have a program to finish the antenna installation at the EOC and this should be completed near the end of August.

The workstations are now solidly mounted to the walls and are earthquake proof.

Flea Market

We are looking for volunteers to help with the SEPARS booth at the upcoming SARC/Langley outdoor flea market on August 22nd, please contact Fred Orsetti ve7io@separs.net or John Schouten ve7ti@separs.net

Incident Command Systems Training

SEPARS will be hosting the second free ICS-100 training course on Saturday October 2, 2010 from 0900 until noon. SEPARS now organizes in accordance with the ICS structure, so having a basic knowledge of how ICS functions is very important. If you missed the first course this is your opportunity to familiarize yourself with incident command, which is how SEPARS will be deployed for all exercises and events.

To make it as realistic and meaningful as possible, we use Field Day as the training scenario. Most hams are familiar with Field Day and we can fill all the ICS positions with Amateurs.

Our weekly net has also been amended to follow the ICS structure. This now includes a full roll call of all our members. Join in on the Tuesday night SEPARS net at 1930 on 146.550 Mhz to see how the ICS leaders and stations are called. Please make an effort to check-in.

SEPARS next meeting will be held at the South Surrey Recreation Center on Wednesday October 6th at 1900 hours.

Remember our website is www.separs.net

"Hard work spotlights the character of people: some turn up their sleeves, some turn up their noses, and some don't turn up at all." - Sam Ewing

Application Notes

Gary Skett VE7AS

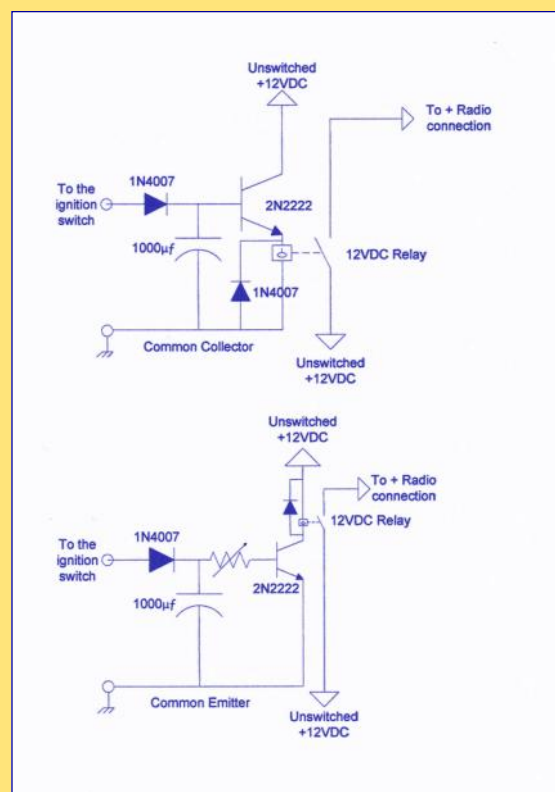
Power-Off Time Delay Relay

The two circuits below illustrate opening a relay contact a short time after the ignition or light switch is turned off. The capacitor is charged and the relay is closed when the voltage at the diode anode rises to +12 volts. The common collector or emitter follower has the advantage of one less part, since a resistor is not needed in series with the transistor base. However the voltage across the relay coil will be two diode drops less than the supply voltage, or about 11 volts for a 12.5 volt input.

The common emitter configuration offers the advantage of the full supply voltage across the load for most of the delay time, which makes the relay pull-in and drop-out voltages less of a concern, but required an extra resistor in series with the transistor base. The common emitter is the better circuit since the series base resistor can be selected to obtain the desired delay time - I've added a variable trim pot for the task to make the delay somewhat adjustable.

The common collector time delay would require changing the capacitor or an additional resistor in parallel with the capacitor to alter the time delay. The time delay for the common emitter will be approximately 3 time constants or $3 \times R \times C$. The capacitor/resistor values can be worked out from the relay coil current and transistor gain. For example, a 120 ohm relay coil will draw 100 mA at 12 volts and assuming the transistor has a gain of 30, the base current will be $100/30 = 3$ mA. The voltage across the resistor will be the supply voltage minus two diode drops or $12 - 1.4 = 10.6$ volts. The resistor value will be the voltage/current = $10.6/0.003 = 3533$ or about 3.6K ohms. The capacitor value for a 15 second delay will be $15/3R = 1327$ μ f. You can use a standard 1000 μ f capacitor and increase the resistor proportionally to get 15 seconds - thus the convenience of a variable trim pot.

This circuit is handy if your APRS tracker is turned off with your ignition switch. Keeps the tracker on long enough to send its last 'posit' before shutting down. In Hybrid vehicles, the accessory battery does not drop in voltage quickly [or at all] so a tracker that is waiting for a substantial voltage drop to turn itself off or detect a vehicle at rest, will never sense the required voltage drop in the battery...so a power-off timer is put in line to make sure the tracker has enough time to send a 'at rest' posit and then shut down until the vehicle is started.



Getting the solidified gunk off antennas that have been "out there" for a few years can be quite a chore. Steel wool pads are not recommended because of their tendency to leave iron whiskers embedded in the aluminum (and your hands), causing spot rust and binding problems in nested tubing. Dave WA3GIN suggests a combination of NAPA engine parts cleaner and a 3M medium foam sanding pad. The result is similar to wet sanding with an agent that dissolves or loosens the oxidized stuff so that the pad *can* break it loose and polish the aluminum. This minimizes the required amount of elbow grease to facilitate the operation.

SARC Foxhunt/DARS Com-Fest

The first weekend in October is full of activities for hams. It's the Delta Amateur Radio Society Com-Fest. Whether you're licensed or not, ComFest weekend is an enjoyment for the whole family.



To start the weekend events, on Saturday afternoon, October 2nd in conjunction with Delta Amateur Radio Association's ComFest 2010, SARC will be hosting an RDF Foxhunt. The start time, location and other details will be announced shortly. Please watch the SARC website www.ve7sar.net for further information.

That evening, come and enjoy a social evening with a wonderful buffet dinner at the Sundance Banquet hall. A great opportunity to meet old friends and swap stories.

Sunday, October 3rd is the swap meet and communications fair, which takes place at the South Delta Recreation Center.

We look forward to seeing you at ComFest weekend.



'Net' Working Internet Resources for Hams

If you have not yet found **WorldRadio On-line**, you are missing out. This magazine publishes monthly at:

<http://www.worldradiomagazine.com/>

It's chock full of articles and features about our hobby and the quality is excellent. This publications is from the folks who also publish CQ magazine. You can download the current and past issues or, click on the 'Sign-Up Now' box found on the WorldRadio Online Welcome page and throughout the issue. You will be directed to an email alert sign up page. When the next issue is posted, They'll send you an email to let you know it's ready to view!

Best of all.... It's FREE

And, more than 3,500 Facebook users have signed up as 'fans' of CQ magazine on the popular internet social networking site. Plus, they represent a considerably younger group of ham radio operators than organized ham radio has been reaching through traditional means.

"According to Facebook's own demographics, the majority of CQ's fans on the site are age 45 or younger," according to CQ Editor Rich Moseson, W2VU. "This is significant because it means we have opened up an impor-

tant avenue of communication with these younger hams by making the effort to go where they 'hang out,' rather than expecting them to find us. This is essential if we are going to make sure that younger hams are connected to the mainstream of the hobby."

Facebook statistics also show that CQ's fans are drawn from all over the world, with more than 20 countries represented and members in the U.S. accounting for only a little more than one-third of all CQ's Facebook fans.

Speaking of younger operators, SARC has offered two complimentary seats at our next Basic licensing course to students who participated in the SEPAR classroom visit last Spring. The future of this hobby lies with developing new devotees and we'll do our part to make it easy.



SARC President's Comments

John Brodie VA7XB



How did we do on Field Day? Our score was 4126 points this year, a gratifying result. But equally important was that we had a large number of participants from both the Surrey and Langley Clubs, we had a lot of fun and the public

and dignitaries came out to learn more about amateur radio and emergency communications. Many have said that it was our best Field Day in recent memory and I agree with that. The most positive comments received ...

- LARA's satellite station was the highlight with visitors and members
- Use of the large, common tent for all operators made for improved teamwork and camaraderie
- Use of smaller, quieter generators saved dramatically on fuel and also reduced the background noise level
- The availability of more towers and beams, as well as 160 m capability, improved flexibility to adapt to band changes
- The Kenwood TS480 radios were a significant improvement over past years as they are more immune to cross-mod, overload and other interference problems
- The video (available on U-Tube) made by John VE7TI was a big hit

Some excellent suggestions were offered to make next year's event even better, including:

- Make sure coffee is available throughout the night for operators
- More separation of CW from SSB operators is needed to minimize verbal distractions
- Find a way to minimize interference to operators from visitors' chatter
- Use the Incident Command System as a training exercise for planning
- Locate the GOTA ("Get-on-the-Air") station within the main operating tent so that new operators have access to the same antennas used by others
- More wire antennas are needed for night-time operation on the low bands
- Have a central coax distribution box with jumpers, to eliminate the difficulty of locating cables during darkness
- Provide more operator training (in advance of FD) along with goal-setting
- Change over logging and radio control to N1MM, a superior contest software
- Ensure that senior club officials are on-hand on Saturday afternoon to greet dignitaries and the public
- Use promotional videos at the public information booth

Final Word: 2010/2011 membership dues are now payable - Please see Scott with your \$20.

DOWN THE LOG...

SARC Monthly Meetings

2nd Wednesday (Sept-Jun)
1900 hrs local at PEP PREOC,
96th Avenue, Surrey

Weekly Club Breakfast

Friday at 0830 local
ABC Country Restaurant located
at 600 - 7380 King George Blvd.
Surrey

SARC Net

Tuesday at 2000 local
on 147.360 MHz (+) Tone=110.9.

SEPARS Net

Tuesday at 19:30 local
on 146.550MHz simplex.

Announcements & News

Ham Radio Open Air Flea Market

Co-sponsored by the Langley and Surrey clubs. August 22nd from 10 to 1400 hrs at Campbell Valley Regional Park.

SARC Fall Foxhunt

Saturday Oct. 2nd is the date of the SARC foxhunt in association with DARS Com-Fest — see pg 5.

Basic Amateur Radio Course

We have had a lot of interest in another Basic Course so we will be putting one on starting in October. The schedule will be published as soon as possible.

On the Web

Between newsletters, watch your e-mail for announcements of events, monthly meetings and training opportunities. These announcements may also be found on our web page.

August 22nd from 1000 to 1400 hrs
CO-SPONSORED BY

The **LANGLEY AMATEUR RADIO ASSOCIATION**
www.langleyamateurradio.com

and The **SURREY AMATEUR RADIO CLUB**
www.ve7sar.net

contact Stan Brown VE7YSB
Phone: 604-534-8256 or 604-574-5060
sabcostan@shaw.ca

Campbell Valley Regional Park



SARC hosts an Amateur Radio net each Tuesday evening at 8 PM. Please tune in to the VE7RSC repeater at 147.360 MHz (+600 KHz) Tone=110.9, also accessible

on IRLP node 1980 and Echolink node 496228. On UHF we operate a repeater on 443.775MHz (+5Mhz) Tone=110.9 and IRPL node 1463. Coming soon, a repeater at 224.000MHz (-1.6MHz).

VIA THE WEB

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